



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-3989; Directorate Identifier 2014-NM-220-AD; Amendment 39-18629; AD 2016-17-16]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model BD-700-1A10 and BD-700-1A11 airplanes. This AD was prompted by in-service reports of passenger door tensator spring failures, and qualification testing indicating that non-conforming tensator springs could be susceptible to failure prior to reaching their safe-life limit. This AD requires revising the maintenance or inspection program to incorporate certain temporary revisions, and replacing the passenger door tensator springs with new springs. We are issuing this AD to prevent tensator spring failure, resulting in the inability to open the main passenger door, which could impede evacuation in the event of an emergency.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3989.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3989; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Fabio Buttitta, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft

Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590;
telephone: 516-228-7303; fax: 516-794-5531; email: Fabio.Buttitta@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc. Model BD-700-1A10 and BD-700-1A11 airplanes. The NPRM published in the Federal Register on March 4, 2016 (81 FR 11471) (“the NPRM”).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-39, dated November 4, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc. Model BD-700-1A10 and BD-700-1A11 airplanes. The MCAI states:

Following the issuance of [Canadian] AD CF-2010-14, additional qualification testing of the passenger door tensator spring, Part Number (P/N) GS321-0580-1, determined that the tensator springs could be susceptible to failure prior to reaching the life limit mandated by [Canadian] AD CF-2010-14.

In addition, there have been in-service reports of passenger door tensator spring failures. Investigation determined that the material used to manufacture the tensator springs [was] improperly heat treated.

The passenger door assembly is installed with four tensator springs that assist the door actuator in opening and closing the door. In-service experience has shown that a failed tensator spring could uncoil and foul up the rotating tensator spools, resulting in the inability to open the main passenger door. The inability to open the main passenger

door could impede evacuation in the event of an emergency.

This [Canadian] AD mandates the revision to the approved maintenance schedule to reduce the repetitive discard task interval and mandates the replacement of non-conforming tensator springs.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3989.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Include Service Information

Bombardier, Inc. requested that we revise the Related Service Information under 1 CFR part 51 section and paragraph (g) of the proposed AD to include Temporary Revision (TR) 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks.

We agree to include TR 5-2-10, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks, as requested by the commenter. Our intent is to correspond with TCCA Canadian AD CF-2014-39, dated November 4, 2014, which includes TR 5-2-9, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks. TR

5-2-10, dated June 4, 2014, supersedes TR 5-2-9, dated September 9, 2014. We have included TR 5-2-10, dated June 4, 2014, in paragraph (g)(2) of this AD and redesignated subsequent paragraph identifiers accordingly. We have also included that same TR in the Related Service Information under 1 CFR part 51 section of this final rule. Since the NPRM inadvertently did not include a TR to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks, we must make this change to avoid operators needing to ask for approval of an alternative method of compliance (AMOC) to use a TR in order to comply with the revision required by paragraph (g) of this AD.

In addition, we have revised paragraph (g) of this AD to refer to Task Number 52-11-41-101 because some TRs include multiple tasks. This AD specifically addresses the passenger door tensator spring, part number GS321-0580-1, and the task number in the TRs for that component is 52-11-41-101.

Request to Correct Typographical Error

Bombardier, Inc. requested that we revise paragraph (g)(2) of the proposed AD to read “Model BD-700-1A10 airplanes,” instead of “Model BD-700-1A11 airplanes.”

We agree. This was a typographical error, and has been corrected in paragraph (g)(3) of this AD (paragraph (g)(2) of the proposed AD).

Request to Revise Compliance Time

NetJets requested that we revise the proposed AD so that the threshold for the initial spring replacement is based on the AD effective date, and not the TR revision date. NetJets explained that paragraph (g) of the proposed AD specifies that the compliance

time for the initial replacement is per the TRs listed in paragraphs (g)(1) through (g)(4) of the proposed AD, or within 30 days after the AD effective date, whichever occurs later. NetJets explained further that the TRs base the threshold from the TR revision date of “Jun 04/2014,” and that by the time the final rule is released, the threshold in the TR will have been exceeded by approximately 2 years. NetJets argued that, therefore, the final rule will effectively mandate a 30-day threshold, which is an undue burden without technical justification.

We do not agree with the request to revise the compliance time in this AD. The compliance time in this AD corresponds with the compliance time in Canadian AD CF-2014-39, dated November 4, 2014. In addition, the commenter did not provide any data to substantiate that extending the compliance time would provide an acceptable level of safety. After considering all the available information, we have determined that the compliance time, as proposed, represents an appropriate interval of time in which the required actions can be performed in a timely manner within the affected fleet, while still maintaining an adequate level of safety. Under the provisions of paragraph (k)(1) of this AD, however, we may consider requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety. We have made no changes to this AD in this regard.

Request to Allow for Later-Approved Revisions of Service Information

NetJets requested that we revise the NPRM to add provisions to allow later FAA-approved revisions to the time limits/maintenance checks manuals (TLMCM), so that an approval of an AMOC will not be required to incorporate the currently published

TLMCM revision and future revisions. NetJets explained that the TRs specified in paragraphs (g)(1) through (g)(4) of the proposed AD have been incorporated in revisions to the listed TLMCMs.

We find that clarification is necessary. Once operators have incorporated the task in the TR into their maintenance or inspection program, the task cannot be changed without approval of an AMOC. However, once the task in the TR is incorporated into the TLMCM, operators that use the TLMCM are still in compliance because the task has not changed. If a future revision of the TLMCM changes the task, then an AMOC would be needed to use the revised task.

We have revised paragraph (g) of this AD to clarify that the revision may be done by inserting copies of the TRs identified in paragraphs (g)(1) through (g)(5) of this AD into the applicable TLMCM. When the information in a TR has been included in general revisions of the applicable TLMCM, the general revisions may be inserted in the TLMCM, and the TR may be removed.

Request for Clarification of the Necessity for a Life Limit Requirement

NetJets requested that we clarify the necessity for the life limit requirement in paragraph (i) of the proposed AD. NetJets stated that paragraph (i) of the proposed AD requires a threshold of "... but not exceeding the applicable life limit of the passenger tensator spring ..." without identifying the referenced life limit, and noted that the listed service information does not include a life limit requirement.

We agree to clarify the requirement specified in paragraph (i) of this AD and the necessity for that requirement. The passenger door assembly is installed with four tensator springs that assist the door actuator in opening and closing the door. In-service

experience has shown that a failed tensator spring could uncoil and foul up the rotating tensator spools, resulting in the inability to open the main passenger door. The inability to open the main passenger door could impede evacuation in the event of an emergency. The actions required by this AD are necessary to address the identified unsafe condition.

Paragraph (g) of this AD mandates the revision to the approved maintenance schedule by incorporating TRs to reduce the repetitive discard task interval. Paragraph (i) of this AD mandates, for certain airplanes, the replacement of non-conforming tensator springs within 15 months after the effective date of this AD, but not exceeding the applicable life limit of 1,500 landings for the component as listed in the applicable TRs identified in paragraph (g) of this AD. The replacement is necessary to ensure the airplanes identified in section 1.A., “Effectivity,” of Bombardier Global 5000 Service Bulletin 700-1A11-52-023, dated October 4, 2013; or Bombardier Global Express/Global Express XRS Service Bulletin 700-52-046, dated October 4, 2013, replace the tensator springs within 15 months, as specified in that service information, but not later than the new life limit. We have revised paragraph (i) of this AD to refer to the TRs in paragraph (g) of this AD for the life limit.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR part 51

We reviewed the following Bombardier, Inc. service information:

- Bombardier Global 5000 Service Bulletin 700-1A11-52-023, dated October 4, 2013.
- Bombardier Global Express/Global Express XRS Service Bulletin 700-52-046, dated October 4, 2013.
- TR 5-2-7, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express XRS BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).
- TR 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks (for Model BD-700-1A11 airplanes).
- TR 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 6000 GL 6000 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).

- TR 5-2-13, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A11 airplanes).

- TR 5-2-44, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).

The service information describes procedures for replacing passenger door tensator springs with new springs. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 60 airplanes of U.S. registry.

We also estimate that it would take about 40 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$204,000, or \$3,400 per product.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2016-17-16 Bombardier, Inc.: Amendment 39-18629. Docket No. FAA-2016-3989; Directorate Identifier 2014-NM-220-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category, serial numbers 9002 and subsequent.

(d) Subject

Air Transport Association (ATA) of America Code 52, Doors.

(e) Reason

This AD was prompted by in-service reports of passenger door tensator spring failures, and qualification testing indicating that non-conforming tensator springs could be susceptible to failure prior to reaching their safe-life limit. We are issuing this AD to prevent tensator spring failure, resulting in the inability to open the main passenger door, which could impede evacuation in the event of an emergency.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Maintenance or Inspection Program Revision

Within 30 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate task number 52-11-41-101 as specified in the Temporary Revisions (TRs) identified in paragraphs (g)(1) through (g)(5) of this AD. The compliance time for doing the initial replacement of the passenger door tensator springs with new springs is at the times specified in the applicable TR specified in paragraphs (g)(1) through (g)(5) of this AD, or within 30 days after the effective date of this AD, whichever occurs later. The revision required by this paragraph may be done by inserting copies of the TRs identified in paragraphs (g)(1) through (g)(5) of this AD into

the applicable Time Limits/Maintenance Checks manual. When the information in a TR has been included in general revisions of the applicable Time Limits/Maintenance Checks manual, the general revisions may be inserted in the Time Limits/Maintenance Checks manual, and the TR may be removed.

(1) TR 5-2-7, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express XRS BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).

(2) TR 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks (for Model BD-700-1A11 airplanes).

(3) TR 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 6000 GL 6000 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).

(4) TR 5-2-13, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A11 airplanes).

(5) TR 5-2-44, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express BD-700 Time Limits/Maintenance Checks (for Model BD-700-1A10 airplanes).

(h) No Alternative Actions and Intervals

After accomplishing the revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections) and intervals may be used unless the actions and

intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k)(1) of this AD.

(i) Replacement

For airplanes identified in section 1.A., “Effectivity,” of Bombardier Global 5000 Service Bulletin 700-1A11-52-023, dated October 4, 2013; or Bombardier Global Express/Global Express XRS Service Bulletin 700-52-046, dated October 4, 2013; except as provided by paragraph (j)(1) or (j)(2) of this AD: Within 15 months after the effective date of this AD, but not exceeding the applicable life limit of the passenger tensator spring identified in the applicable TR specified in paragraphs (g)(1) through (g)(5) of this AD, replace the passenger door tensator springs having part number (P/N) GS321-0580-1, with new springs, in accordance with the Accomplishment Instructions of Bombardier Global 5000 Service Bulletin 700-1A11-52-023, dated October 4, 2013; or Bombardier Global Express/Global Express XRS Service Bulletin 700-52-046, dated October 4, 2013; as applicable.

(j) Acceptable Alternative Actions for Paragraph (i) of this AD

(1) For airplanes having serial numbers (S/N) 9278 through 9360 inclusive: Replacement of the passenger door tensator springs having P/N GS321-0580-1 with new springs before the effective date of this AD is acceptable for compliance with the requirements of paragraph (i) of this AD. Refer to the task specified in the applicable TRs identified in paragraphs (g)(1) through (g)(5) of this AD for subsequent spring replacements.

(2) For airplanes with serial numbers other than those identified in paragraph (j)(1) of this AD: Accomplishment after the effective date of this AD of the “Time Limits/Maintenance Checks” discard task identified in the applicable service information specified in paragraphs (g)(1) through (g)(5) of this AD is acceptable for compliance with the requirements of paragraph (i) of this AD.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the New York ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7300; fax: 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, FAA; or Transport Canada Civil

Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(l) Related Information

Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2014-39, dated November 4, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3989.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Temporary Revision 5-2-7, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express XRS BD-700 Time Limits/Maintenance Checks.

(ii) Temporary Revision 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks.

(iii) Temporary Revision 5-2-10, dated September 9, 2014, to Part 2, Section 5-10-11, of Bombardier Global 6000 GL 6000 Time Limits/Maintenance Checks.

(iv) Temporary Revision 5-2-13, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global 5000 BD-700 Time Limits/Maintenance Checks.

(v) Temporary Revision 5-2-44, dated June 4, 2014, to Part 2, Section 5-10-11, of Bombardier Global Express BD-700 Time Limits/Maintenance Checks.

(vi) Bombardier Global Express/Global Express XRS Service Bulletin 700-52-046, dated October 4, 2013.

(vii) Bombardier Global 5000 Service Bulletin 700-1A11-52-023, dated October 4, 2013.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.
Issued in Renton, Washington, on August 18, 2016.

Dorr M. Anderson,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.
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